Notice of Allowability	Application No.	Applicant(s)	
	09/756,348	MALVAR ET AL.	
	Examiner	Art Unit	
	Jerome Grant II	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *an interview conducted 12-17-2004*.

2. ☒ The allowed claim(s) is/are *1, 3-10, 12-15, 16, 18-21 and 22*.

3. ☒ The drawings filed on *08 January 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

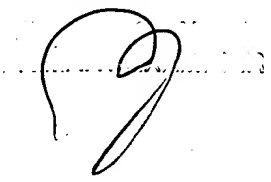
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *12-17-2004* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.



Reasons for Allowance

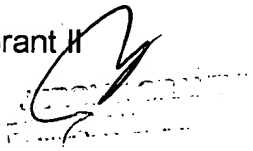
Claims 1, 3-10, 12-15, 16 and 18-21 and 22 are allowed for the reason the prior art does not teach or suggest the vertical and horizontal scanning in a contiguous manner for the purpose of improving the compression of image data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 703-305-4391. The examiner can normally be reached on Jerome Grant II from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A Williams, can be reached on 703-305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J. Grant II



Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James Pringor on Dec. 27, 2004.

Examiner's Amendment

1. (Currently Amended) A data compression system, comprising:

a scanning component which contiguously scans at least a portion of a transformed image, wherein the contiguous scan is performed substantially in a horizontal direction on a first section of the portion and in a vertical direction on a second section of the portion to enable improved data compression of the transformed image.

2. (Cancelled)

3. (Original): The data compression system of claim 1, further comprising a wavelet transform subsystem for transforming an image into wavelet coefficients *via* low pass and high pass filters applied to the image.

4. (Original): The data compression system of claim 3, further comprising a quantizer for reducing stored data associated with the wavelet coefficients.

5. (Original): The data compression system of claim 3, further comprising a reordering and blocking subsystem to provide a matrix of wavelet coefficients that are organized into at least one of low-low (LL), low-high (LH), high-low (HL), and high-high (HH) sub-bands.

6. (Original): The data compression system of claim 5, wherein the LH sub-bands are scanned in the vertical direction and the HL sub-bands are scanned in the horizontal direction.

7. (Original): The data compression system of claim 5, wherein the LL and HH sub-bands are scanned in either the horizontal or the vertical direction.

8. (Original): The data compression system of claim 5, wherein run length encoding is employed to encode the scanned coefficients.

9. (Original): The data compression system of claim 8, wherein at least one of Golomb-Rice encoding and Arithmetic encoding is employed to encode the scanned coefficients.

10. (Currently Amended) A method for providing a data compression system, comprising:

contiguously scanning at least a portion of a transformed image in substantially a horizontal direction on a first section of the portion;

and contiguously scanning in a vertical direction on a second section of the portion of the transformed image to enable improved data compression of the transformed image.

11. (Canceled)

12. (Original): The method of claim 10, further comprising:

transforming an image into wavelet coefficients *via* low pass and high pass filters applied to the image.

13. (Original): The method of claim 12, further comprising:

reordering and blocking to provide a matrix of wavelet coefficients that are organized into at least one of low-low (LL), low-high (LH), high-low (HL), and high-high (HH) sub-bands.

14. (Original): The method of claim 13, wherein the LH sub-bands are scanned in the vertical direction and the HL sub-bands are scanned in the horizontal direction.

15. (Original): The method of claim 13, wherein the LL and HH sub-bands are scanned in either the horizontal or the vertical direction.

16. (Currently Amended) A data compression system, comprising:

means for contiguously scanning at least a portion of a transformed image in substantially a horizontal direction on a first section of the portion; and

means for contiguously scanning in a vertical direction on a second section of the portion of the transformed image to enable improved data compression of the transformed image.

17. (Cancelled)

18. (Original): The data compression system of claim 16, further comprising:

means for transforming an image into wavelet coefficients *via* low pass and high pass filters applied to the image.

19. (Original): The data compression system of claim 18, further comprising:

means for reordering and blocking to provide a matrix of wavelet coefficients that are organized into at least one of low-low (LL), low-high (LH), high-low (HL), and high-high (HH) sub-bands.

20. (Original): The data compression system of claim 19, wherein the LH sub-bands are scanned in the vertical direction and the HL sub-bands are scanned in the horizontal direction.

21. (Original): The data compression system of claim 19, wherein the LL and HH sub-bands are scanned in either the horizontal or the vertical direction.

22. (Original): An image compression system, comprising:

a wavelet transform subsystem for transforming an image into wavelet coefficients; and

a scanning component which contiguously scans at least a portion of the transformed image, wherein the contiguous scan is performed substantially in a horizontal direction on a first section of the portion and in a vertical direction on a second section of the portion to enable improved data compression of the transformed image.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 703-305-4391. The examiner can normally be reached on Mon.-Fri. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A Williams, can be reached on 703-305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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J. Grant II